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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,939	12/02/2002	Scott R. Sehlin	000093-210	7431

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MARSTELLER & ASSOCIATES, P.C.
PO BOX 803302
DALLAS, TX 75380-3302

EXAMINER	
WILKINS III, HARRY D	

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/065,939	SEHLIN, SCOTT R.	
	Examiner	Art Unit	
	Harry D Wilkins, III	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 December 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admission of prior art in view of Carlson et al (US 5,797,964).

Applicant admits as prior art (see paragraphs 4-6, 13 and 16 and figure 3) that electrochemical gas generating systems for concentrating a selected gas from a feedstock fluid of the ceramic membrane system permeable to selected charged particles flowing from a first side to a second side were known.

However, Applicant's admission does not teach the variable-voltage circuitry as claimed.

Carlson et al teach (see abstract and col. 4, lines 1-30) a power supply including a DC power (voltage) source in an electrical power circuit, a plurality of fixed resistance resistive elements arranged in parallel in the circuit, switching means for selectively connecting desired resistive elements in the circuit and control means for controlling the connection of at least one resistive element in the circuit. The controller controllably affects a varying voltage (i.e.-varying flow of charged particles) through the circuit.

Therefore, it would have been obvious to have added the variable-voltage circuitry of Carlson et al to the apparatus of Applicant's admission because the precise

control of voltage would allow for precise control of gas generation in the electrochemical system. The DC power supply would have been connected across the first and second sides of the permeable barrier system.

Regarding claim 4, Carlson et al teach (see col. 4, lines 7-10) using resistors.

Regarding claims 5 and 10, Carlson et al teach (see col. 4, lines 7-10) using resistors. Resistors generate waste energy in the form of heat.

Regarding claims 6, 7, 11 and 12, the apparatus of Applicant's admission requires (see figure 3) several sources of heat, including to pre-heat the fluid and also to heat the oven chamber. Carlson et al teach (see col. 4, lines 7-10) using resistors. Resistors generate waste energy in the form of heat. Therefore, it would have been obvious to one of ordinary skill in the art to have adapted the apparatus of Applicant's admission to use the resistors of Carlson et al to either preheat the fluid or to heat the oven chamber in order to reduce energy wasting.

Regarding claim 8, Applicant's admission teaches (see paragraph 4) a barrier system permeable to selected charged particles flowing from a first side to a second side.

Regarding claim 9, Applicant's admission (see paragraph 4) includes the permeable barrier system being a component of a COG system.

Response to Arguments

3. Applicant's arguments filed 9 September 2004 have been fully considered but they are not persuasive. Applicant argued that:

a. Carlson teaches using the power supply for a different function and thus is not reasonably pertinent to the particular problem with which the inventor was concerned.

In response, while it is true that Carlson uses the power supply for a different use, it still would have been obvious to one of ordinary skill in the art to have used the variable voltage power supply of Carlson for other uses where precise control of a voltage which can be varied is desirable and needed. This includes the prior art COGS, where precise and variable control of the voltage would have provided for easy adjustment of oxygen output (as admitted as prior art, see paragraph 4). Thus, Carlson not only is reasonably pertinent to the problem addressed by the present invention, it solves the exact same problem, a cheap and easily controlled variable voltage device.

b. There is no motivation to combine the teachings

In response, the motivation to combine comes from Carlson in that the variable voltage device allows for precise control of a voltage output that is superior to the prior art devices. Thus, taking the known COG system, it would have been obvious to one of ordinary skill in the art to have used the variable voltage controller of Carlson for the purpose of improving control of the voltage which was admitted by Applicant as being a parameter which effects the rate of oxygen output. Thus, one of ordinary skill in the art would have been motivated to increase the precision of the control on the applied voltage in order to improve the ability to control the reactor system.

Also, it is the Examiner's impression that Applicant has argued the rejection as being based upon Carlson alone. However, the rejection grounds are not based on

Carlson alone, they are based on Applicant's disclosure of the prior art COG system which is discussed in paragraphs 4-6 of the specification as modified by the teachings of Carlson. The difference between the prior art COG system and the present invention is the addition of a variable voltage controller as claimed. However, such a variable voltage controller was known in the prior as evidenced by Carlson. The variable voltage controller of Carlson provided an easy and compact way to precisely control an output voltage. Thus, the motivation to add the variable voltage controller of Carlson was to add precise control of the voltage to the prior art COG system.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry D Wilkins, III whose telephone number is 571-272-1251. The examiner can normally be reached on M-Th 10:00am-8:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Harry D Wilkins, III
Examiner
Art Unit 1742

hdw

ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700